# Developing an Army Safety Awareness Program – Aviation (SAP-A)

Aviation Directorate

United States Army Combat Readiness/Safety Center

Data Current as of 01 MAR 12

# Safety Awareness Program – Aviation (SAP-A)

SAP-A is a program designed to enhance aviation safety through the prevention of accidents and incidents

- anonymous, self-reporting system modeled after systems currently in place at many airlines under auspices of the Federal Aviation Administration (FAA)

- encourages voluntary reporting of operations and maintenance safety high risk practices

- designed to provide a non-punitive environment for the open reporting of safety concerns and

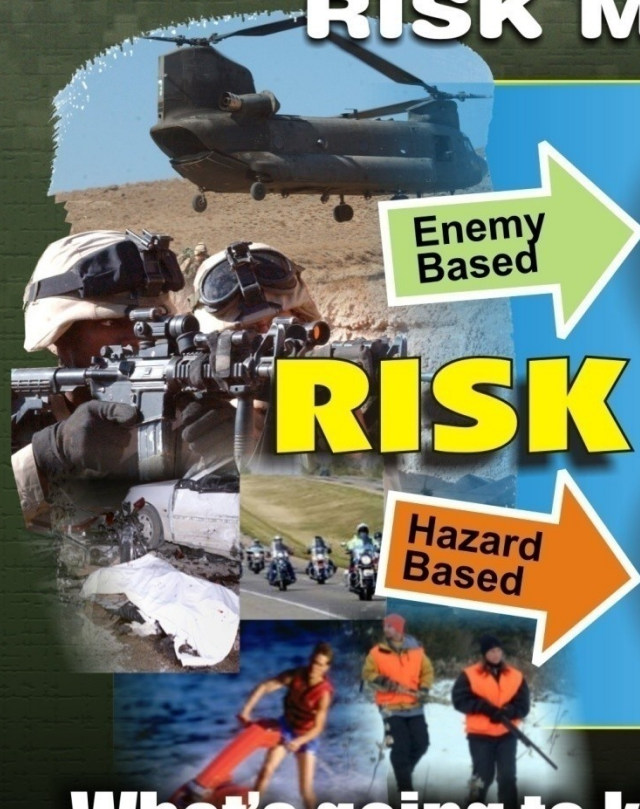
# End state of SAP-A Implementation

To prevent mishaps by addressing unintentional errors, hazardous situations and events, or high-risk activities not identified and/or correctable by other methods or through traditional safety reporting sources

- The reported information is used to reduce mishaps through operational, maintenance, training and procedural enhancements
- Due to its capability of providing *early identification* of needed safety improvements, SAP-A offers significant potential for avoiding mishaps

# Where's the Risk?

## COMPOSITE RISK MANAGEMENT



RISK

Enemy Based

IED
Small Arms/RPG
MANPADS

Risk Management

Hazard Based

Speed
Restraints
Roadways

Risk Management

Successful Risk Management

MISSION ACCOMPLISHED

**What's going to kill me & my buddies, The enemy or a hazard?**

CR5-05C

# SAP-A ASSISTS IN EARLY IDENTIFICATION OF RISK -

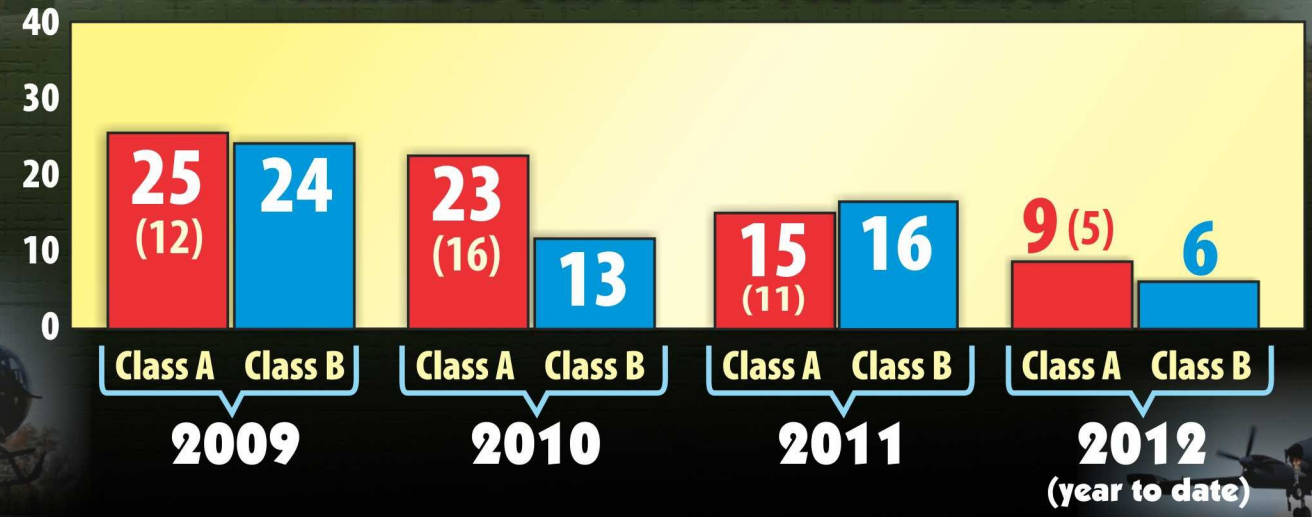
- Textual reporting of errors, high-risk activity, or observed hazardous situations
- Non-punitive resolution of safety, training, and ops issues at the unit level
- Facilitates commander’s risk management process
- Includes analysis, trending & corrective action capability at the Army/joint level
- Tailored report format for various users
- Augments, but does not replace, existing safety reporting systems
- In use by Air Force (Air Mobility Command), Navy and the commercial airline industry – titled Aviation Safety Action/ Awareness Program (ASAP)

# Aviation Trends

- **Overconfidence/Complacency**
  - – 88% involved overconfi[illegible]/complacency
- **In[illegible]e Mi[illegible]ion Planning**
  - [illegible] plan for obstacles
  - [illegible]anagement issues
- **Aircrew [illegible]**
  - – 22% involved
  - [illegible] occurred during the day
  - [illegible]% happened during training

HUMAN ERROR

## Manned Aircraft Accidents




As of 27 February 2012

TF12-01B

# Why Army Aviation Needs SAP-A

- Has the potential to reduce the large % (> 80%) of accidents caused by Human Error

- DSOC pays for Beta and Operational tests and development for the Army
  - The joint community is working ASAP/SAP-A as a parallel action
- Logical step into the digital age of reporting hazards to Army Aviation
- Current HAZLOG methods are antiquated;  SAP-A is a proactive approach
- Greatly improves the ability to capture and quickly share Army level trend information

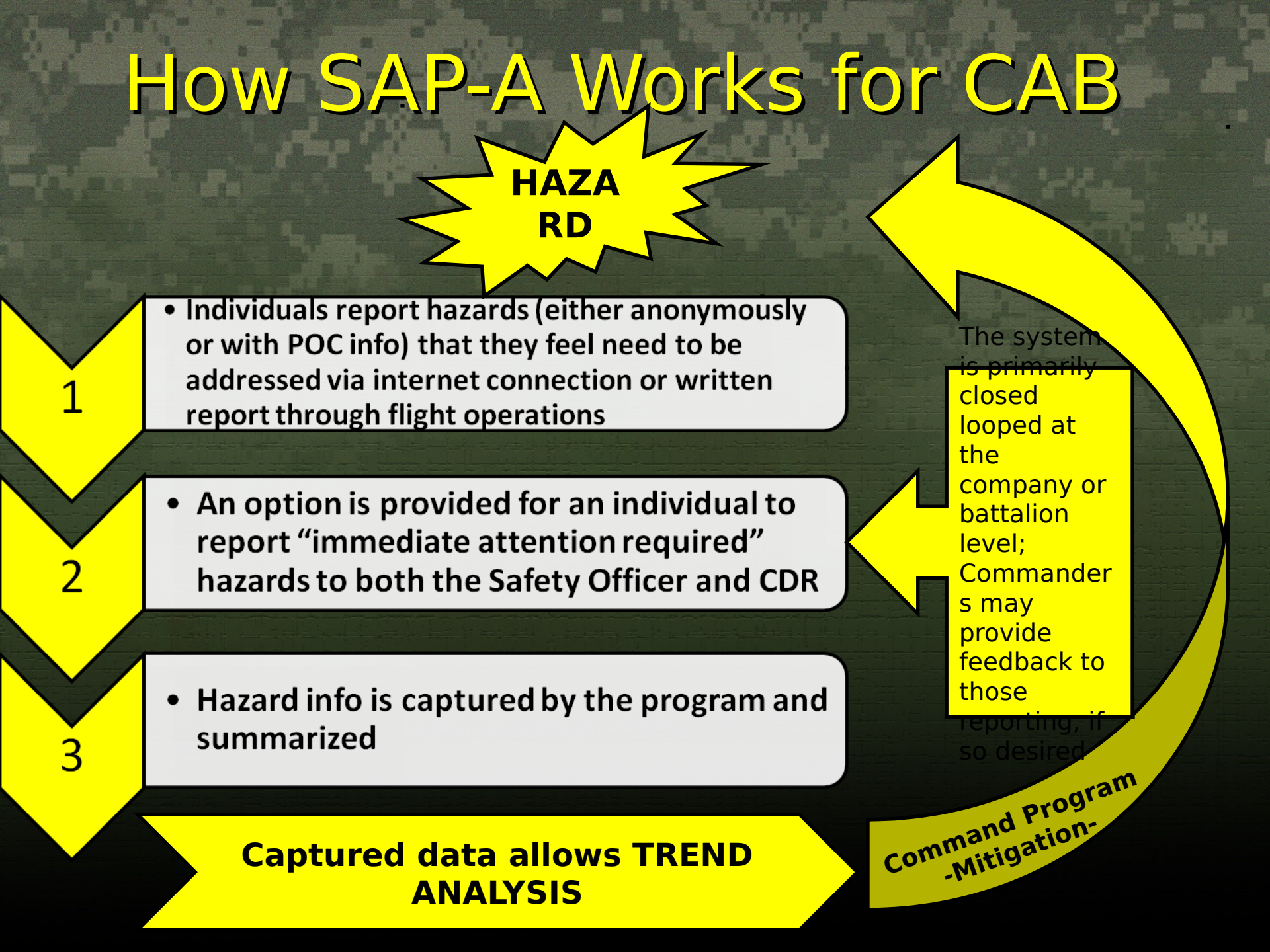
# Programs in Use

- Navy requires 100% post-flight ASAP/SAP-A reporting
- Air Force: in use by AMC
  - AMC/CV-directed assessment Aug 07
  - AMC/A3 and staff visited Continental Airlines in ‘08 and ‘09
  - AMC program demo Jun 09, now throughout AMC
- In use by most commercial airlines
- In use by NASA
- Army has no program for operational units

# What SAP-A Can Capture

- *SAFETY OF FLIGHT RELATED EVENTS NOT NORMALLY REPORTED OR CAPTURED BY OTHER METHODS*
- Unintentional errors by individuals, crewmembers or other personnel involved with a mission
- Errors committed by other individuals or organizations that adversely affected or could have affected the safety of the mission (includes maintenance, operations, POL; not just aircrew reports)
- Any unsafe action, event or condition encountered, from mission planning through execution
- Observed hazards that may not have directly affected your operation, but may affect another
- Any other events considered worthy of reporting to ensure safe practices and flying safely

# How SAP-A Works for CAB



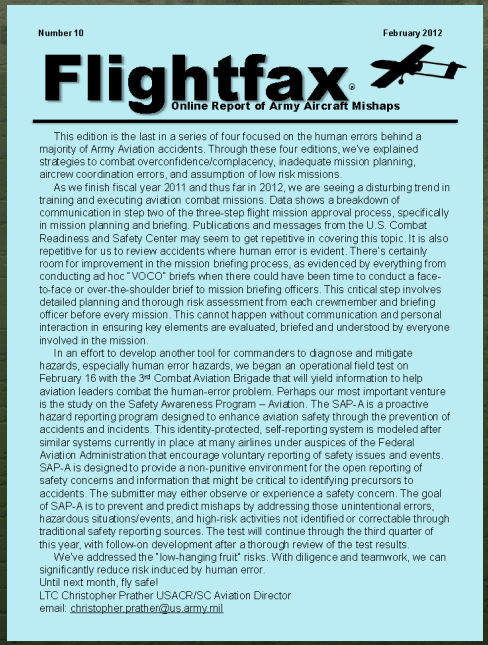
# How SAP-A Works for Aviation

HAZARD TRENDS

1. • Individuals report hazards (either anonymously or with POC info) that they feel need to be addressed via internet connection or written report through flight operations

2. • BRZ works to gather and maintain all hazard reports for the Army and provide trend analysis

3. • Army wide trend information to the CRC (Aviation Directorate)



Number 10 February 2012

**Flightfax**

Online Report of Army Aircraft Mishaps

This edition is the last in a series of four focused on the human errors behind a majority of Army Aviation accidents. Through these four editions, we've explained strategies to combat overconfidence/complacency, inadequate mission planning, aircrew coordination errors, and assumption of low risk missions.

As we finish fiscal year 2011 and thus far in 2012, we are seeing a disturbing trend in training and executing aviation combat missions. Data shows a breakdown of communication in step two of the three-step flight mission approval process, specifically in mission planning and briefing. Publications and messages from the U.S. Combat Readiness and Safety Center may seem to get repetitive in covering this topic. It is also repetitive for us to review accidents where human error is evident. There's certainly room for improvement in the mission briefing process, as evidenced by everything from conducting ad hoc "VOCO" briefs when there could have been time to conduct a face-to-face or over-the-shoulder brief to mission briefing officers. This critical step involves detailed planning and thorough risk assessment from each crewmember and briefing officer before every mission. This cannot happen without communication and personal interaction in ensuring key elements are evaluated, briefed and understood by everyone involved in the mission.

In an effort to develop another tool for commanders to diagnose and mitigate hazards, especially human error hazards, we began an operational field test on February 16 with the 3rd Combat Aviation Brigade that will yield information to help aviation leaders combat the human-error problem. Perhaps our most important venture is the study on the Safety Awareness Program – Aviation. The SAP-A is a proactive hazard reporting program designed to enhance aviation safety through the prevention of accidents and incidents. This identity-protected, self-reporting system is modeled after similar systems currently in place at many airlines under auspices of the Federal Aviation Administration that encourage voluntary reporting of safety issues and events. SAP-A is designed to provide a non-punitive environment for the open reporting of safety concerns and information that might be critical to identifying precursors to accidents. The submitter may either observe or experience a safety concern. The goal of SAP-A is to prevent and predict mishaps by addressing those unintentional errors, hazardous situations/events, and high-risk activities not identified or correctable through traditional safety reporting sources. The test will continue through the third quarter of this year, with follow-on development after a thorough review of the test results.

We've addressed the "low-hanging fruit" risks. With diligence and teamwork, we can significantly reduce risk induced by human error.

Until next month, fly safe!

LTC Christopher Prather USACR/SC Aviation Director

email: christopher.prather@us.army.mil

**•At the Army level, USACRC shares Army Aviation wide trend information across aviation brigades**

**•At the joint level, services will share hazard information in order to avoid replicating mistakes made**

# Time Line for SAP-A

ARMY SAP-A PROGRAM

JUL 12 – SEP 12
Analysis of operational results;
changes to Army SAP-A
long term funding

FY 2012 DoDI
"Proactive Safety Programs such as MFOQA and SAP-A"

15 FEB – 28 JUN 12 Operational Test

SEP 11 DSOC Statement of work for Operational Test Completed

06-14 FEB 12 Conduct unit train-up

NOV 11 Initial unit coordination

NOV 11 Unit Selection for SAP-A participation (3CAB & HAAF)

OCT 11-JUN 12 Development of Smart Phone App

OCT 11 Staffing actions to identify designated unit(s) for operational tes
plus
individual ARNG, USAR, FW, ATC

25 JUL – 31 AUG 11: Small scale beta test conducted at FT Rucker, AL

# Requirements: Operational Test

- 3rd CAB Identified to participate in a six month operational test

Who: 3rd CAB, Hunter AAF, GA. Additional participants include HAAF Operations and USCG Savannah

What: Conduct SAP-A reporting ICW post mission de-briefs. Goal would be mandatory participation as part of the risk management process

When: Test commences 2nd and 3rd Quarter FY12

Where: Unit location: Hunter AAF, GA

How: Reports are made through a BRZ web site or as a written entry; development of a smart phone app will be researched

Why: To supplement safety/hazard reporting procedures and to test the program for large scale use

# Specific Unit Requirements

- Unit area:  Internet access to SAP-A website
- Input from aircrew following each mission to include NSTR
- Personnel provide feedback on SAP-A procedures to develop and improve the system
- Testing/reporting lasts for a six month period
- ASOs/Cdrs monitor results and provide feedback

# CRC Requirements

- Army POC (Aviation Directorate – USACR/SC) for SAP-A testing and implementation
- Coordinate for statement of work for contracting SAP-A Operational Test.  Sole source contracting awarded to BRZ to run the Operational Test
- Coordinate for unit training for conduct of the test
- Funding for Operational Test approved through DSOC for FY 12.  Should include hiring of one civilian contactor at the USACR/SC to implement and monitor SAP-A actions
- Gauge success of testing and provide recommendations for implementation and long term funding

# Long Term Requirements

- Acceptance: Navy's ASAP/SAP-A is mandated; Air Force is voluntary; recommended Army course of action is to make it a mandatory part of the debriefing process through unit flight operations (unit Aviation Safety Officer remains the focal point)

- Funding: DSOC initiatives are funding beta tests through SEP 2012. Long term funding must be established in order to continue with the program beyond 2012. Current thought process is for the USACR/SC to budget for the Army

# Website: https://brz-inc.com/army

# SAP-A Input Procedures

SAP-A Entry Form

*If A Reportable Event Occurred, Then Please Select 'Yes' and Click 'Next'*

SAP-A

Report Date (mm/dd/yyyy)

02/28/2012

Did A Noteworthy Event Occur ?

(•) Yes ( ) No

Aircraft

(•) UH-60L

Next | 12.5% | Help

## Narrative

*Please Enter Comments To Help Clarify And Categorize The Main Event That Occurred*

SAP-A

Comments / Lessons Learned / What Could Be Improved (Maximum 2000 characters)

Ground ATC cleared two aircraft out of hot refuel without giving advisories of the movement to each aircraft



Characters Remaining:

1892

Back | Next | 25.0% | Help

## Event Category

*Please Categorize The Main Event / Reason For This Report By Clicking On The Appropriate Selection, e.g. (Airframe, Birds, Hypoxia, etc.)*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Airfield | Animal/Vehicle Activity | Irregular Ops | Lights/Signs/Paint | NAV Aid | Pad | Runway | Taxiway |
| Airspace | Altitude Deviation | Birds | Near Mid Air | Operating Area | Route Deviation | UAS Conflict | |
| Communication | Controlling Agency | Equipment Problem | Lost Comm | Pilot/Crew/Mx | Tactical Comm | | |
| Compliance | Aircraft Limitations | Controlling Agency | Indiscipline | ROE | SOP | | |
| Maintenance | Acft Not Ready | Aircrew Delay | Fueling Issue | Mx Pers/Equip/Parts | Mx/Aircrew Conflict | Repeat Gripe | System Failure |
| Mission Snafus | Briefing | Computer Availability | Debriefing | Execution | Parts Availability | Planning | Scheduling |
| Physiology | Distraction | Fatigue | Hypoxia | Illness | Illusion | Temperature Extreme | Vertigo |
| Return To Base | Approach | Emergency Landing | Go Around | GPWS/Terrain | Landing | Pattern | |
| Runway Events | Abnormal Landing | Aborted T/O | Blown Tire | Incursion | | | |
| Unsafe Practices | Aircraft | Controlling Agency | Ground Equipment | Personnel | | | |
| Weather | Forecast Accuracy | Graphics Usefulness | High/Limit Winds | Icing | Severe Weather | Visibility/Ceiling | Weather Brief Delivery |

Back | Next | 37.5% | Help

## Details

*Please Complete These Fields Concerning Specifics Pertaining To This Flight*

SAP-A

Reply Requested ?

(•) Yes ( ) No

Email (Optional - Needed if Reply Desired):

dickinsr@whatever.com

**Potential Hazard ?**

(•) Yes ( ) No

**Mission Aborted ?**

( ) Yes (•) No

Back | Next | 50.0% | Help

## Event Location

*Please Select Where The Main Event Occurred, e.g. What Phase Of Operation Was Associated With The Main Event.*
*Enter Four Letter ICAO Identifier If Applicable To The Event (Please Enter NONE if ICAO was NOT pertinent to the event).*

SAP-A

**Phase of Operation**

Pre-flight | Ground Ops | Departure | Enroute | Mission | **Arrival** | Post-flight

**ICAO Identifier (4 Letter)**

KSVN

**Waypoint, Lat/Long, HLZ, OLF, FOB, etc.**

Hot Refue

Back | Next | 62.5% | Help

## Command Overview

*Please Enter Your Assessment Of Overall Company Command Climate Indicators*

SAP-A

| | | | |
|---|---|---|---|
| Composite Risk Management | Helped | No Effect | Hurt |
| Mission Planning | Helped | No Effect | Hurt |
| Training | Helped | No Effect | Hurt |
| Fighter Management | Helped | No Effect | Hurt |
| Safety Program | Helped | No Effect | Hurt |
| After Action Review | Helped | No Effect | Hurt |

Back | Next | 75.0% | Help

## Survey

*Please Complete All Survey Questions*

SAP-A

1.SAP-A has the potential to aid Army Aviation units in identifying and acting on problem areas.

| Strongly Agree | Agree | Agree Somewhat | Disagree Somewhat | Disagree | Strongly Disagree |
|---|---|---|---|---|---|

Comments

Back | Next | 87.5% | Help

**Complete**

*Please Click The 'Submit' or the 'Finish' Button To Enter Information Into The Database*

SAP-A

SAP-A

Submit

Back | 100.0% | Finish | Help




**SAP-A Entry Form - Success**

*You have successfully added an ASAP Report to the system. Thank you for your input!*

*To enter another report, do one of the following:*

- *Click on the graphic in the upper left corner of the screen.*
- *Select the menu item **Enter Pulse+** on the menu bar.*
- ***NOTICE: For Security Purposes, The System Will Now Automatically Logout In 30 Seconds Unless You Click Button Below***

System Record Number: **4** - (Use this number if you ever need to refer to this report)

Time Remaining To Automatic Logout

14.6

**Cancel Auto Logout**

# Example SAP-A Report

## Report Comments

### 01 JAN 10 - 31 JAN 10

| | | | | | |
|---|---|---|---|---|---|
| 04 Jan 2010 | 69619 | Aviator | E-2C | NO EVENT OCCURRED | No Event Occurred |

Nothing to report.

| | | | | | |
|---|---|---|---|---|---|
| 05 Jan 2010 | 70132 | Aviator | E-2C | Airspace | Near Mid Air |

While on missed approach for PAR to RNY 29 at KNZY (North Island) a C-2 was transiting the airfield from the Bay Approach over the departure end of runway 29 at 600 feet. Crew of E-2 had to take evasive manuevering, aggressive climbing left, turn to avoid the traffic. E-2 crew was not aware of traffic until missed approach was initiated and traffic called by PAR final controller. Tower was not simulcasting on the final controller frequency. E-2 passed overhead of the C-2 at approx. 400 feet on climbout toward Point Loma.

| | | | | | |
|---|---|---|---|---|---|
| 06 Jan 2010 | 70688 | Aircrewman | C-2A | NO EVENT OCCURRED | No Event Occurred |

everything went well.. How about one of those buttons at the top? Flight went as briefed, no problems at all..... check!

| | | | | | |
|---|---|---|---|---|---|
| 06 Jan 2010 | 70703 | Aviator | E-2C | Maintenance | Airframe |

Smoke and fumes in the FEC caused us to abort our mission and RTB. Handled emergency in accordance with NATOPs procedures the plane was safely landed back at home field with the severity of the emergency not necessitating an emergency divert.

| | | | | | |
|---|---|---|---|---|---|
| 06 Jan 2010 | 70728 | Aviator | E-2C | Airspace | Birds |

Two BASH incidents today. First occurred at the 90 (left base) on a VFR approach to runway 21. Aircraft was descending through 450-425 feet AGL when a large flock of seagulls (no kidding) was aquired by the CAPC (Non-flying pilot) visually ahead of and slightly below the aircraft (in the predicted flight path). CAPC directed copilot to not descend any further, and added power. Birds passed directly below the aircraft no less then 50 feet. Flock was big enough to pass down both sides of the aircraft. Similar flock experienced on the next pass (PAR runway 21) same altitude roughly the same location, though closer to the extended centerline of the runway. The approach was being ,wn slightly left of course due to crosswinds. Altitude was roughly the same (between 450-425 feet AGL). CAPC (Non-flying pilot) again noticed the flock visually and directed a climbe and added power to avoid collision with numerous seagulls. Landing conducted normally following the glideslope deviation. If the visual scan had not picked up these birds in either case, a collision would have occured and due to the volume and size of the birds may have resulted in dual engine loss for the E-2 at extremely low altitude. Of note, CAPC experienced a similar near miss on previous flight at the 90 for runway 21 but did not report b/c it was a single incident. This is now becoming a trend and warranted reporting. Position of flock seems to indicate there may be something on the ground North of highway 1 in the farmers fields that are attracting this many seagulls (trash pile, fertilizer, etc.)

| | | | | | |
|---|---|---|---|---|---|
| 06 Jan 2010 | 70739 | Aviator | E-2C | Airspace | Birds |

Encountered a large flock of birds at the 90 for runway 21. Pilot quickly added power and climbed above the flock at approximately 425 ft.

| | | | | | |
|---|---|---|---|---|---|
| 07 Jan 2010 | 71035 | Aviator | E-2C | Airspace | Operating Area |

A very close VFR Traffic during a Tacan Approach. ATC reported it with a traffic alert call to us.

| | | | | | |
|---|---|---|---|---|---|
| 06 Jan 2010 | 71205 | Aviator | E-2C | Airspace | Birds |

Bird hazard evident on recovery. Reported via BASH program. Pilot efficiency and SA saved the day when they noticed the birds early and increased power to avoid.

| | | | | | |
|---|---|---|---|---|---|
| 08 Jan 2010 | 71395 | Aviator | E-2C | Communication | ATC |

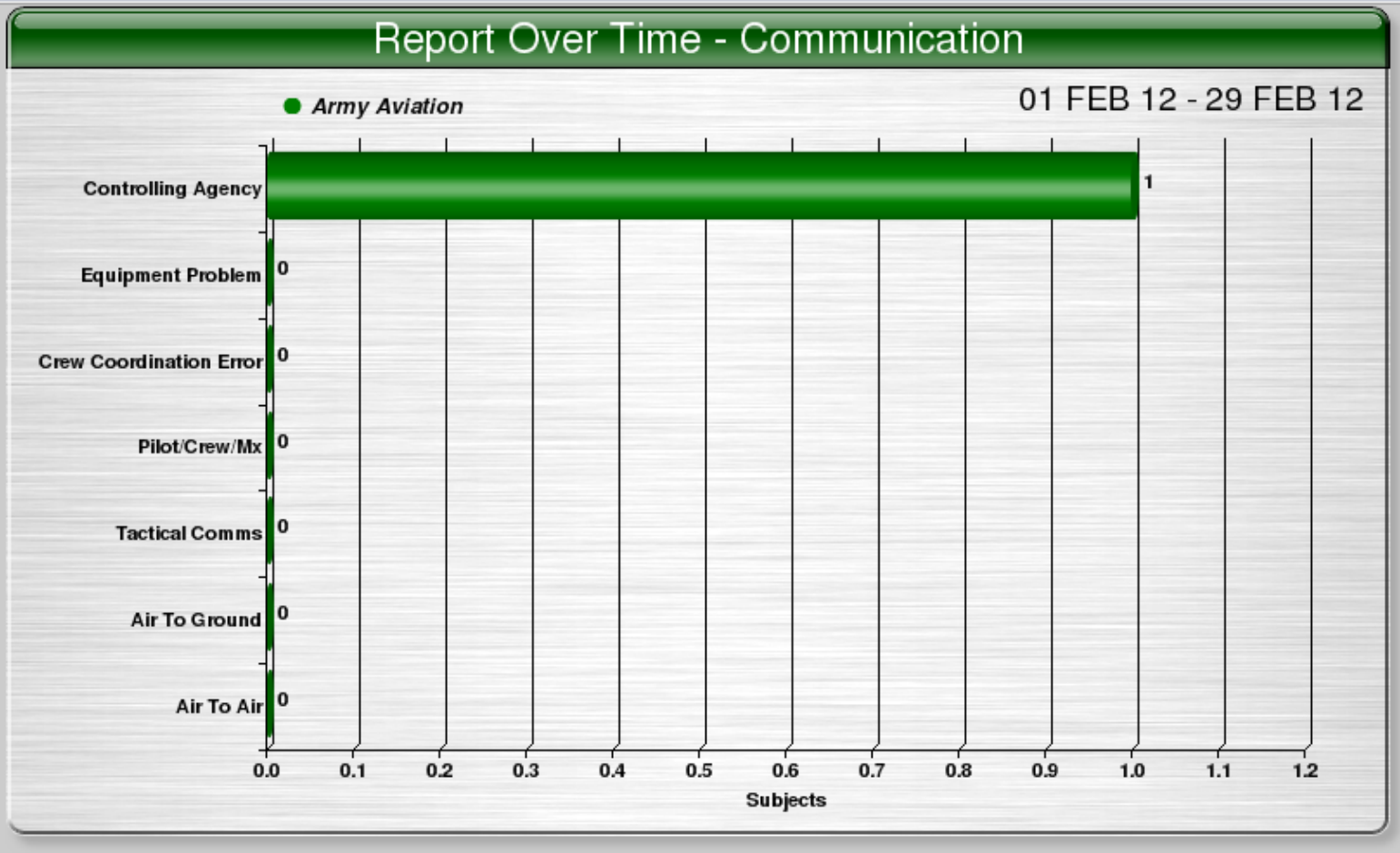
Tower cleared us for PEL while C-130 in pattern below us. Would have resulted in both of us being at the same part of the pattern around short final. Elected to perform one turn at high key and then commence. After commencing, told by tower to extend off of low key for traffic on approach. Makes PPEL useless because unable to practice whole approach.

| | | | | | |
|---|---|---|---|---|---|
| 08 Jan 2010 | 71504 | Aviator | E-2C | Airspace | Birds |

,ring landing/touchdown the aircraft flew through a number of small birds. post flight inspection did now show any impact on the aircraft

Subjects

## Subjects



SAP-A

Enter SAP-A | Report | SAP-A News | Quarterly Rpt | User Manual | Logout |

ISSUE 01

April – June 2011

# N-Plane View

## Latest News ...

Newsletter will provide information that is current, informative and topical to Army Aviation.

More to come ..

This is a template place holder for the newsletter itself.

## this issue



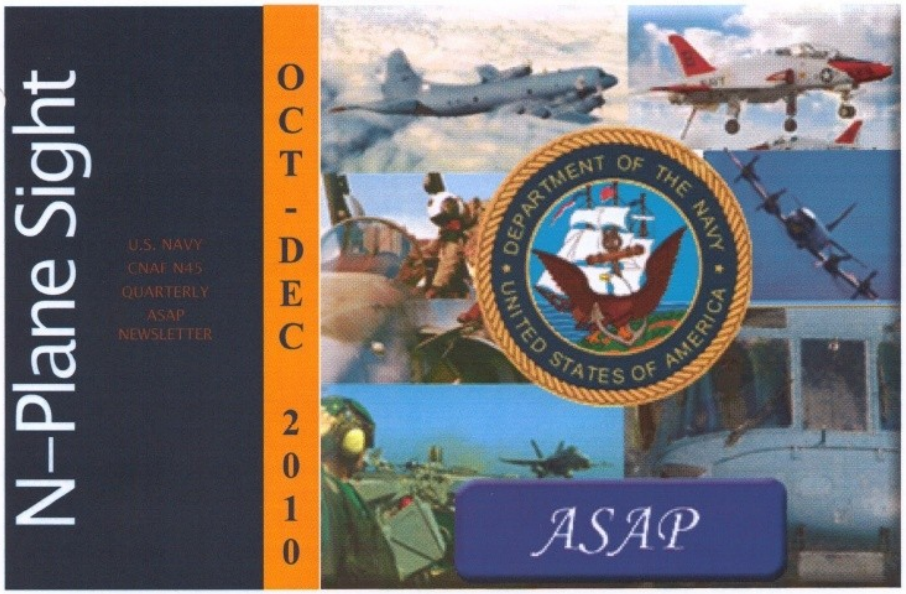
**N-Plane View is a quarterly newsletter from Army Safety which presents significant ASAP information as well as safety related articles and sound bites.**

What Is ASAP

Frequently Asked Questions

# Newsletter

Draft




**N-Plane Sight is a monthly newsletter from CNAF N45 presenting ASAP information identified as significant and safety related articles and sound bites**

**Answering the ASAP hate mail**:

When ASAP started, the Air Boss said he wanted an ASAP report after every flight to infuse the program into the culture of Naval Aviation. He knew it would be one more thing on your already full plate, but he believed the value of the program warranted the extra effort. By design, ASAP is a living program, one that has changed and will continue to change as participation warrants. Many of you think the information is going into a black hole; you're wrong. Every ASAP input is reviewed and mined for actionable information; even the ones asking us to perform some anatomically impossible act with our heads. The people analyzing the data have been in the business of working with high risk operations for more than 30 years. They're use to taking the hits from highly skilled professionals who think programs like ASAP are a waste of their valuable time. That was exactly the reaction of emergency room Doctors when asked to participate in a program similar to ASAP. But after they realized that business as usual was not going to reduce the 15,000 foreign objects left in patients after surgery; the 50,000 cases of "wrong site" operations; and the 200 people who die from medical malpractice each year, they got onboard. Once they decided to give the program a try, the results made them ardent supporters; why? - because it works. In the end, the decision to participate constructively in the Navy ASAP program is yours. If you give it an honest shot, it can help save lives and airframes.

Pilot Error: Increasing or Decreasing?

2011

A study conducted by John Hopkins University Bloomberg School of Public Health on a case-series analysis of crashes and other mishaps of domestic air carrier flights (n = 558) that occurred during 1983 through 2002 concluded that the overall mishap rate remained fairly stable, but the proportion of mishaps involving pilot error decreased from 42% in 1983-1987 to 25% in 1998-2002. The rate of mishaps related to poor decisions declined from 6.2 to 1.8 per 10 million flights, a 71% reduction; much of this decrease was attributed to a 76% reduction in poor decisions related to weather.

Draft

# SAP-A DEMO

https://brz-inc.com/armytest

# Questions?